

Uncertain Supply Chain Management

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Sustainability context and industry profile on the effect of gender diversity on firm value

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ABSTRACT

Article history:

Received November 10, 2022

Received in revised format

December 12, 2022

Accepted March 23 2023

Available online

March 23 2023

Keywords:

Gender diversity

Sustainability report disclosure

Firm value

Industry profile

Sustainable investment

The aim of this study is to test the influence of the board's gender diversity on firm value through sustainability report disclosure. The research also examines the effect of industry profile in moderating the board's gender diversity relationship with sustainability report disclosure and the moderation of sustainable investment practices in the relationship between sustainability report disclosure and firm value. The testing uses panel data regression to analyze 306 sample data from non-financial companies listed on the Indonesia Stock Exchange that comply with the sample selection criteria. The research findings prove that board gender diversity is able to increase firm value because investors view the presence of female board members as reflecting a good corporate governance mechanism. This research also proves that the presence of women board members reduces the level of sustainability report disclosure. The effect of board gender diversity on sustainability report disclosure is reduced in high-profile companies. High-profile companies experience strong pressure to make disclosures of activities in which environmental and social impacts are transparent. Conversely, this study cannot demonstrate a mediating role of sustainability report disclosure on the effect of board gender diversity on increasing firm value. The interaction effect of sustainable investment practices is also not significant in this study. The research findings provide an understanding of board gender diversity, sustainability report disclosure, and firm value within the multi-theoretical framework of agency theory, stakeholder theory, and social role theory.

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1. Introduction

The gender diversity of boards has as its background the issue of gender equality in the fields of economics and labor. The Organization for Economic Cooperation and Development (OECD) publishes gender equality recommendations (OECD's 2013 Recommendation on Gender Equality in Education, Employment and Entrepreneurship/OECD Gender Recommendation) that encourage increased gender diversity in the structure of corporate boards. A review of the literature on this issue shows that research on the effect of board gender diversity on company performance and value has been carried out extensively because it has received attention from academics in both developed and developing countries (Nguyen et al., 2021). However, the results of these studies have yielded mixed results (Carter et al., 2003; Campbell & Mínguez-Vera, 2008; Herdhayinta et al., 2021; Chauhan & Dey, 2017; Handajani et al., 2014). This study aims to analyze the effect of board gender diversity on firm value and the mediating role of sustainability report disclosure in this relationship. The authors look at the impact of the presence of women board members on the compliance aspect of business ethics in sustainability report disclosure which leads to an increase in firm value. The influence of the industry profile is also believed to put pressure on the relationship between a board's gender diversity and the commitment to submit a sustainability report. The financial crisis that occurred several years ago questioned the effectiveness of the role of company boards in addressing various issues related to governance, reporting quality, and company performance (Pucheta-Martínez et al., 2018). Several studies state that company boards play a role in reporting practices and procedures, overseeing management actions (Ong & Djajadikerta, 2020; Zahra

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& Pearce, 1989), and encouraging voluntary disclosure (De Villiers & Maroun, 2018). Improving the quality of board decisions drives an increase in firm value due to the crucial role of boards in investment decisions, acquisitions, capital budgeting, operational planning, and reporting (Van Horne & Wachowicz, 2008). Board quality and effectiveness in making strategic decisions is determined by board diversity (Campbell & Mínguez-Vera, 2008; Rose, 2007; Ntim, 2015); one form of this diversity that is still being debated is board gender diversity (Carter et al., 2003; Rao & Tilt, 2016; Croci, 2018). Board gender diversity is a governance mechanism that can improve the quality of governance, transparency, monitoring, and protection of shareholder rights (Adams & Ferreira, 2009; Loukil et al., 2019). Board gender diversity creates a diversity of perspectives within the boardroom that influences the company's strategic choices and decisions. The corporate board is a critical link between shareholders and management and this makes board diversity a vital issue in the corporate governance mechanism.

Most of the findings yielded by previous research have indicated that board gender diversity increases firm value because the qualitative characteristics of women have a positive influence on the firms where they are present (Carter et al., 2003; Campbell & Mínguez-Vera, 2008; Lückerath-Rovers, 2011; Gyapong et al., 2016; Gordini & Rancati, 2017). Firm value increases because investors appreciate the mechanism of good corporate governance as reflected in the existence of board gender diversity. From the perspective of agency theory, board structures with female representation are able to protect the interests of shareholders. The presence of women on boards is believed to reduce agency costs because it creates a more independent board structure, improves board monitoring capabilities (Adams & Ferreira, 2009; Carter et al., 2003; Carter et al., 2010; Isidro & Sobral, 2015; Thoomaszen & Hidayat, 2020), and encourages better perceptions in terms of business ethics (Adams & Ferreira, 2009; Nielsen & Huse, 2010). However, in contrast to this, several studies have found opposite results (Herdhayinta et al., 2021; Jadiyahappa et al., 2006), while other studies have found no effect on increasing firm value (Chauhan & Dey, 2017; Handajani et al., 2014). These mixed findings are associated with differing views on the role of women in companies. Culture and regulations are considered to form gender stereotypes in Indonesia and so these become obstacles to women's involvement in business (Herdhayinta et al., 2021). The representation of women on company boards in Indonesia tends to be low. This shows that the existence of female board members is only a formality to comply with regulations and facilitate the recruitment of resources (Handajani et al., 2014). The patrilineal cultural context reinforces the “glass ceiling” phenomenon, in which women are seen as carrying out certain roles and having certain statuses in society which become obstacles to being involved in business (Wallace, 2009; Herdhayinta et al., 2021). Women members of boards are seen as a minority group, and they are less likely to have the power to influence the majority opinion than men (Konrad et al., 2008). The inconsistency of previous research findings and the patrilineal cultural context in Indonesia make gender diversity of boards an interesting component of diversity to study.

Board gender diversity is the presence or representation of women on company boards that is rationalized from a business perspective (Kamalath & Masselot, 2019). The qualitative characteristics of women are believed to have a positive influence on corporate behavior. The presence of women leads to different influences and changes in orientation in strategic decision-making. Board gender diversity promotes a level of independence and more effective monitoring thereby increasing the quality of governance (Adams & Ferreira, 2009; Carter et al., 2003). The gender diversity of boards is an interesting issue in both developed and developing countries considering there are differences in regulations and implementation of gender equality. Representation of female board members in Norway, France and Italy is mandatory as a matter of policy, while in Australia, the United Kingdom, Spain, and the United States, they use a comply-or-explain approach (Ben-Amar et al., 2015). Indonesia, with its developing country economy, regulates the representation of women in legislative positions through Law Number 8 of 2012, but there are no regulations regarding the representation of women among corporate executives. This study contributes to the debate on the effect of board gender diversity in terms of increasing firm value. Specifically, this study analyzes the impact of the presence of female members on improving qualitative aspects, namely compliance with sustainability initiatives as a form of ethical corporate behavior. Previous research has been limited to examining the impact of the presence of women on boards on increasing market performance (Loukil et al., 2019), increasing dividend payout (Herdhayinta et al., 2021), and financial performance (Darmadi, 2013; Adams & Ferreira, 2009). Other research has attempted to examine the impact of board gender diversity on the possibility of forming an ethics committee within a company (Isidro & Sobral, 2015). This study extends the perspective that the presence of women on boards encourages an increase in qualitative aspects which are believed to increase firm value. The agency theory and social role theory approaches are based on the idea that the presence of women as members of boards influences the ethical behavior of boards due to unique characteristics such as high moral standards, empathy, and social and environmental sensitivity (Amorelli & García-Sánchez, 2021), creating a smooth and gentle orientation towards subordinates, and a tendency to avoid conflict (Powell, 1990; Amorelli & García-Sánchez, 2021). The social role theory perspective explains that women are labeled as having different roles from men in terms of tasks and functions in society (Eagly & Kite, 1987; Eagly, 2009). The unique characteristics of women—who tend to be communal, to exhibit empathy and concern, and be careful and thorough—lead to higher levels of compliance in terms of sustainability report disclosures and to an increase in firm value (Bristy et al., 2021; Amorelli & García-Sánchez, 2021).

Disclosure of sustainability reports in Indonesia is voluntary. The country has agreed to work towards the sustainability goals (SDGs) and this initiated the implementation of sustainability in business through the Financial Services Authority Regulation Number 51 of 2017 concerning the Implementation of Sustainable Finance. The sustainability report disclosure is either

delivered separately or integrated into the annual report with the framework of the GRI guidelines (GRI Standards), AA10000, the Sustainability Accounting Standards Board (SASB), and the International Standards Organization (ISO). The GRI guidelines are the framework for the majority of global companies when compiling sustainability reports and they help companies to present meaningful information while avoiding excessive information (Global Reporting Initiative (GRI), 2016). The GRI Guidelines have proven successful in their comprehensiveness, adoption rate, visibility, and prestige (Brown et al., 2009). Regardless of standardization efforts by the government and GRI, the intensity and quality of sustainability report disclosure in Indonesia are still quite low. Only 17% of the companies listed on the Indonesia Stock Exchange in 2019 submitted sustainability reports (Yanti & Gayatri, 2021). The score for disclosure intensity of Indonesian companies is the second lowest among ASEAN countries (Loh et al., 2017). Previous research has linked disclosure initiatives to governance mechanisms such as corporate board structures that have strategic decision-making authority. A company's board has the role of formulating and disseminating company goals and policies, supervising executive compensation and performance achievement, acting on behalf of the company's interests, and connecting the company with the external environment, and securing important resources (Hung, 2011).

The effect of board gender diversity on increasing sustainability report disclosure is influenced by company characteristics. This argument is based on the idea that the effect of the presence of female board members on increasing sustainability report disclosure is stronger when the company has high-profile characteristics. High-profile companies have high political pressure and risk, and high consumer visibility, so they tend to increase transparency through sustainability report disclosure (Sudjana & Sudana, 2017; Ahmad et al., 2018; Watts & Zimmerman, 1990). This study uses a stakeholder theory approach to explain the effect of company profile interactions on the effect of board gender diversity and corporate sustainability report disclosure. This study also deepens the analysis of the interaction of sustainable investment practices with the relationship between sustainability report disclosure and firm value. Sustainability report disclosure further encourages an increase in firm value when the company implements sustainable investment practices. A review of the literature shows that companies that practice sustainability tend to make greater disclosures to increase firm value (Hummel & Schlick, 2016; Lang & Lundholm, 1992).

This research contributes to the development of various aspects of governance literature, sustainability report disclosure, and firm value. First, this research fills in the gaps found in previous research by examining how the unique characteristics of women encourage the level of compliance with sustainability report disclosure and thereby increasing firm value. The literature review shows that there is still limited research that examines the effect of board gender diversity on compliance with the business ethics of sustainability report disclosure and, in this way, increasing firm value. This study adopted the concept developed by Isidro & Sobral (2015) to contribute to the literature in Indonesia. These research findings provide an understanding of how women, as a minority group, do not have the power to influence the opinion of the majority, as well as how the position of women can be a form of tokenism in order to fulfill the expectations of certain stakeholders. Second, this research demonstrates the effect of board structure mechanisms on the level of sustainability disclosure and firm value in the context of countries with developing economies. Indonesia provides an interesting background to develop this research considering the absence of gender quota regulations for corporate executives, the fact that the implementation of sustainability initiatives is still in its early stages, and the intensity and quality of corporate sustainability report disclosures tend to be low. The Indonesian cultural context, which tends to be patrilineal, yields findings that are different from previous studies.

Third, according to the perspectives of agency theory, stakeholder theory, and social role theory, this research provides evidence that confirms the effect of board gender diversity on firm value in Indonesia through sustainability report disclosure. The majority of previous studies that were reviewed analyze the impact of board gender diversity on economic performance and firm value. Thus, the results of this research have important implications for companies regarding the composition of a board that is able to increase a company's compliance with business ethics in terms of sustainability report disclosure. Fourth, this research contributes by providing evidence of the influence of governance mechanisms on compliance with sustainability report disclosure and firm value in accordance with governance guidelines in Indonesia which separate the responsibilities of the Board of Commissioners and the Board of Directors. These research findings encourage companies to evaluate internal governance mechanisms that increase compliance with sustainability report disclosure and firm value. They have implications for regulators regarding increasing the dissemination of sustainability regulations, especially regarding the company's compliance in terms of sustainability report disclosure.

This study is presented in five sections. It begins with this introduction, and then part one discusses the previous literature and the development of hypotheses. The second section describes the methodology used including sample information, data collection, and the empirical model. Section three presents the empirical results before continuing with a discussion in section four. Conclusions are presented in the fifth and final section.

2. Literature Review and Hypotheses

The agency theory perspective explains that the separation of responsibilities between principals and agents in a company tends to create a misalignment of the interests of managers and shareholders (Jensen & Meckling, 1976). Principals have the option of monitoring the actions of managers through disclosure and reporting, as well as implementing good corporate governance to overcome agency problems (Eisenhardt, 1989; Fama & Jensen, 1983; Jensen & Meckling, 1976). The oversight

mechanism is implemented by placing the company's board structure as a representative of the principal's interests and protecting the interests of shareholders, thus reducing the possibility of misallocation of funds and increasing shareholder value (Fama & Jensen, 1983; Ogden et al., 2012; Van Horne & Wachowicz, 2008). The company board serves as a source of strategic information, provides advice in strategic decision-making, monitors management actions, provides access to resources, and has a major influence on company reporting practices and procedures (Isidro & Sobral, 2015; Ong & Djajadikerta, 2020). The role of the board as a critical link between shareholders and management means the composition of the board is crucial (Van Horne & Wachowicz, 2008).

A review of previous literature shows that board diversity is an important factor in corporate governance that influences the quality and effectiveness of the board in decision-making (Nguyen et al., 2021; Campbell & Mínguez-Vera, 2008; Rose, 2007; Ntim, 2015). Board diversity is the diversity of the company's board composition in terms of gender, age, ethnicity, nationality, educational background, experience, and organizational membership that creates a combination of qualities, characteristics, and expertise in decision-making (Campbell & Mínguez-Vera, 2008; Hassan et al., 2015; Gordini and Rancati, 2017). Globalization and increased diversity in business mean that paying attention to diversity issues is a strategy to increase firm value through improving decision quality, market understanding, innovation, and leadership creativity (Nguyen et al., 2021; Sila et al., 2016; Hassan et al., 2015). In the context of increasing firm value, board diversity encourages the maximization of benefits and increases stakeholder trust so as to achieve a competitive advantage (Hassan et al., 2015; Lückerath-Rovers, 2011). According to the agency view, the board acts to represent the interests of shareholders by providing advice and supervising the actions of management. Therefore, the more diverse the backgrounds and characteristics of company board members, the more the board's monitoring capabilities, independence, and effectiveness, as well as the ability of the board as a whole are increased (Adams & Ferreira, 2009; Carter et al., 2003, 2010; Isidro & Sobral, 2015; Thoomaszen & Hidayat, 2020). Diversity makes an important contribution because each individual has unique skills, education, experience, and expertise that are useful in decision-making (Rao & Tilt, 2016). Board diversity results in a wider perspective in looking at a problem and generates alternative solutions and more diverse consequences (Hambrick et al., 1996).

Board gender diversity is a component of diversity which is a significant issue for modern companies that is still being debated (Carter et al., 2003; Rao & Tilt, 2016; Croci, 2018). The presence of female board members is believed to give the board a better understanding of the market, especially regarding consumers and female workers, as well as investors and other stakeholders, thereby enhancing the company's image (Lückerath-Rovers, 2011; Loukil et al., 2019). Women's participation on corporate boards affects the quality of strategic decisions because they have a variety of competencies, experiences, ideas, and critical and creative thinking (Isidro & Sobral, 2015; Terjesen et al., 2009; Nielsen & Huse, 2010). The majority of previous studies have depicted the relationship between board gender diversity and firm value from a business perspective. This study describes the impact of board gender diversity on firm value from the perspective of business ethics regarding compliance with sustainability report disclosure. When seen through a social role theory lens, the participation of female board members encourages companies to have stronger altruistic and pro-social preferences (Rao & Tilt, 2016). The qualitative characteristics of women board members, such as high moral standards, more sensitivity and emotion, as well as a higher degree of empathy, encourage companies to perform and exhibit social and environmental responsibility more broadly (Amorelli & García-Sánchez, 2020). This study also looks at the interaction effect of company profiles and sustainable investment practices in relation to board gender diversity's effect on firm value through sustainability report disclosure. Company profiles lead to greater pressure to be transparent about operating activities that have an environmental impact (Sudjana & Sudana, 2017). The characteristics of the industry profile tend to cause a difference in sustainability report disclosure between high-profile and low-profile companies (De Klerk et al., 2015; Garcia et al., 2017; Qureshi et al., 2019). Likewise, sustainable investment practices reflect the company's efforts to manage the environment so as to protect it and reduce negative impacts (Chariri et al., 2019). Implementation of sustainable investment practices strengthens the impact of sustainability report disclosure on increasing market value, given the tendency for companies to make broader disclosures related to achieving better performance (Al-Tuwaijri et al., 2004). The following is a conceptual model and hypothesis development that explains the relationship between the variables studied.

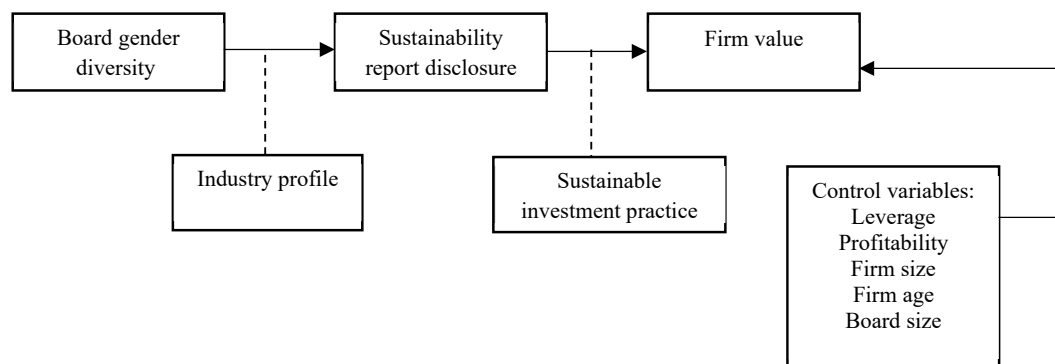


Fig 1. Conceptual model: The relationship between board gender diversity, sustainability report disclosure, industry profile, sustainable investment practices and company values

2.1 Board gender diversity

The greater representation of women in corporate board structures encourages increased firm value. According to the agency theory perspective, board gender diversity improves the quality and effectiveness of boards as they are influenced by the unique characteristics of women. The presence of women members in the board room brings a variety of skills, information, and experience that promotes a more effective monitoring function. Female directors have a higher frequency of meeting attendance, which has a positive influence on the board as a whole (Adams & Ferreira, 2009). Representation of women in board structures provides a wider perspective that enhances critical analysis for problem-solving and leads to better quality decision-making (Nguyen et al., 2021). Board gender diversity is considered to be a mechanism that can improve the quality of transparency, monitoring, and protection of shareholder rights (Adams & Ferreira, 2009; Loukil et al., 2019). From a stakeholder perspective, board gender diversity creates a board structure that is able to collaborate and build networks with groups of female employees and consumers, as well as one that has experience in the fields of human resources and marketing, thereby achieving increased performance and corporate value (Gyapong et al., 2016; Liu et al., 2014). Previous research has shown that the greater the board's gender diversity, the greater the board's independence because women tend to have thoughts and ideas that are different to male board members (Carter et al., 2003). The increase in the representation of women on company boards is seen as a reflection of the quality of good governance so it is appreciated by external parties by increasing the value of the company. Based on the literature review, this study analyzes the impact of board gender diversity on firm value. In line with some research results (Nielsen & Huse, 2010; Gordini & Rancati, 2017; Loukil et al., 2019), the presence of women in the boardroom is believed to overcome agency problems because they have higher monitoring abilities and independence, which is due to the diversity of abilities, experience, ideas, as well as critical and creative thinking. Therefore, this study argues that the higher the degree of board gender diversity (a higher proportion of women), the better the quality of the board which increases firm value. The hypothesis proposed in this study is as follows.

Hypothesis 1: *Board gender diversity has a positive effect on firm value.*

A review of several previous studies shows that the existence of board gender diversity is able to increase adherence to the disclosure of sustainability reports. The effect of board gender diversity on firm value is not only reflected in financial performance measures but also has a qualitative effect in terms of improvement within the company (Isidro & Sobral, 2015). The qualitative improvement reflects the qualitative benefits of the presence of women in boardrooms, namely the increase in sustainability report disclosure. The social role theory perspective states that women have different functions and roles from men that are formed socially and culturally (Eagly & Kite, 1987; Eagly, 2009). Women have better communal, caring, sympathetic, and sensitive traits, as well as better social and ethical behavior than men (Eagly & Kite, 1987; Eagly, 2009; Bristy et al., 2021; Ben-Amar et al., 2015). These characteristics cause women board members to pay more attention to qualitative aspects such as social responsibility, philanthropy, business ethics, and good relations with employees (Bear et al., 2010; Isidro & Sobral, 2015; Nguyen et al., 2021). Through the lens of stakeholder theory, increasing women's participation on boards can be seen as encouraging sustainability report disclosure as a reflection of the company's compliance with ethical and social standards, so it has positive implications for company value (Isidro & Sobral, 2015; Arayssi et al., 2016). The presence of women on the board represents the interests of certain consumer and workforce groups so it reflects the protection of stakeholder interests and creates good relations with key stakeholders which become catalysts for business continuity (Chauhan & Dey, 2017; Arayssi et al., 2016; Francoeur et al., 2008; Rose, 2007; Pucheta-Martínez et al., 2018). The involvement of women on company boards directs company policies toward being more pro-social and attentive to the welfare of stakeholders. Based on the literature review, this study argues that the higher the degree of board gender diversity, the broader the sustainability report disclosure which leads to an increase in firm value. The hypothesis proposed is as follows.

Hypothesis 2: *Board gender diversity has a positive effect on sustainability report disclosure.*

Hypothesis 4: *Board gender diversity has a positive effect on firm value through sustainability report disclosure.*

2.2 Sustainability report disclosure

The triple bottom line concept explains that companies create value in multiple economic, environmental, and social dimensions (Elkington, 2006). The company's real commitment to sustainability is integrated into a business model that describes and communicates sustainability initiatives (Bini & Bellucci, 2020). Sustainability report disclosure is a response to pressure from stakeholders to carry out the concept of sustainability and provide information about the economic, environmental, and social impacts of a company's activities. Sustainability report disclosure is a driving force for business transformation that supports the achievement of the SDGs (GRI Universal Standards, 2021). A sustainability report is a report that reveals the impact of organizational activities, both positive and negative, on the environment, society, and the economy, thus providing an understanding of the effects of sustainability on organizational activities and strategies (Global Reporting Initiative (GRI), 2016). According to stakeholder theory, sustainability report disclosure is a sign of a company's willingness to communicate social issues and maintain good relations with stakeholders (Herzig & Schaltegger, 2006). The existence of companies that are bound to the environment and dependent on stakeholder support encourages companies to carry out activities that prioritize the interests of stakeholders (Epstein et al., 1984). Sustainability report disclosure is an instrument for

increasing accountability in order to create good relations with stakeholders and a competitive advantage (Jiang et al., 2021). Investors use the information in this report to examine critical aspects that cannot be explained by financial measures such as human capital, relational capital, and organizational capital for making investment decisions (Bini & Bellucci, 2020). Investors assess sustainability report disclosure as an activity that exceeds stakeholder expectations so that they positively evaluate the company's efforts to make broader sustainability disclosures. In the end, the company realizes that the practice of disclosing sustainability information is a strategy that increases resource efficiency.

The majority of previous studies in the literature have found that sustainability report disclosure has a positive effect on firm value. Sustainability information plays a complementary role to the financial information that reflects the long-term value and possible risks and opportunities faced by companies (Kuzey & Uyar, 2016). The company's efforts to carry out sustainability reporting disclosures are considered to be protection for the interests of stakeholders as well as a value-creation activity (Herzig & Schaltegger, 2006; Parmar et al., 2010; Qureshi et al., 2019). Sustainability report disclosure is able to increase credibility and trust through transparency of company sustainability policies and programs (Bini & Bellucci, 2020). However, the delivery of sustainability reports has also been criticized in several previous studies. Sustainability reports only present information on the positive impacts of company activities economically, environmentally, and socially. The use of sustainability reports as an impression-management strategy leads to efforts to obscure real environmental performance (greenwashing) and tends to choose to display positive impacts and obscure the company's negative effects (cherry-picking) (Cho et al., 2012; Ardiana, 2021; Mahoney et al., 2013; Hummel & Schlick, 2016). The debate about the impact of sustainability report disclosure has encouraged this research to analyze the effect of sustainability report disclosure on firm value. The argument developed is that the broader the sustainability report disclosure as a reflection of accountability and transparency, the higher the firm's value. The hypothesis proposed is as follows.

Hypothesis 3: *Sustainability report disclosure has a positive effect on firm value.*

2.3 Industry profile

The industry profile is affected by the operating activities carried out. Companies with operations that have an impact on the natural and social environment are environmentally sensitive firms (Qureshi et al., 2019). These companies have increased risks related to potential litigation and future environmental liabilities and they receive higher publicity and attention (De Klerk et al., 2015; Qureshi et al., 2019). The high-profile and low-profile dichotomy is used to classify companies based on industry characteristics (Hackston & Milne, 1996). According to some studies (Hackston & Milne, 1996; Roberts, 1992), high-profile companies have high consumer visibility, high levels of political risk, intense and concentrated competition, and they have strict legal restrictions. Conversely, low-profile companies have the characteristics of low consumer visibility, little political pressure and risk, and a low level of competition. High-profile companies feel great pressure to make comprehensive disclosures of social and environmental responsibilities so as to reduce risks as subjects of greater political costs (Sudjana & Sudana, 2017; Ahmad et al., 2018; Watts & Zimmerman, 1990; Garcia et al., 2017; de Villiers & Maroun, 2018).

Previous research has found that companies with production processes that have a negative impact on the environment tend to carry out broader sustainability report disclosures (Garcia et al., 2017). According to the stakeholder theory approach, companies adapt to changes in investor preferences that require companies to run environmentally friendly and more ethical businesses (Qureshi et al., 2019). Investors make positive adjustments to risk assessments of future cash flows in companies that carry out a broader sustainability report disclosure, especially companies in environmentally sensitive industries (De Klerk et al., 2015). This shows that sustainability report disclosure is vital for companies that are sensitive to the environment. On the other hand, high-profile companies tend to have boards with gender diversity as an effort to reduce stakeholder skepticism and increase the legitimacy of social and political aspects (de Villiers & Maroun, 2018; Hackston & Milne, 1996; Roberts, 1992; Saeed et al., 2021). This study analyzes the effect of industry profile interaction on board gender diversity's relationship with sustainability report disclosure. The argument put forward is that the condition of companies with high political pressure, high consumer visibility, and high competition encourages the effect of board gender diversity on sustainability report disclosure to get stronger. The hypothesis proposed is as follows.

Hypothesis 5: *Industry profile moderates the effect of board gender diversity on sustainability report disclosure.*

2.4 Sustainable investment practice

Sustainable investment practice indicates a transformation of modern business that emphasizes sustainability (Fortune et al., 2017). Changes in the company's paradigm in the aspects of profit, people, and planet lead to changes in strategic investment decisions (Chariri et al., 2019). Investment decisions that consider social or moral aspects are made by companies as a means of protection, as well as reducing negative impacts on the environment (Nakamura, 2011; Paramita & Chariri, 2013). From the perspective of stakeholder theory, companies implement sustainable investment practices as a form of corporate responsibility toward stakeholder demands regarding environmental issues (Chariri et al., 2019). Sustainable investment practice is believed to play a role as a strategy that can improve the company's reputation, create a competitive advantage, and

lead to an increase in firm value. Stakeholders gain confidence in the company's commitment to sustainability issues through sustainability practices and disclosures (Jiang et al., 2020).

The literature review shows that companies that practice sustainable practices and achieve sustainable performance tend to make greater disclosures to increase firm value (Hummel & Schlick, 2016; Lang & Lundholm, 1992). The company provides honest information about environmental performance so that it is seen as being a transparent company (Al-Tuwaijri et al., 2004), which in turn is able to improve its image and sustainability in the long term (Syabilla et al., 2021). Disclosure of environmental information by companies is a sign of the legitimacy of allocating profits for funding environmental governance (Rini & Adhariani, 2021). Several companies disclose green investment activities because they are related to social benefits so that they are positively assessed by investors (Martin & Moser, 2012). On the other hand, one study (Patten, 2002) found that companies with poor environmental performance tend to face greater exposure, therefore, to gain trust, they will make broader environmental disclosures. This is associated with the use of sustainability reports as a tool to reduce the potential negative effects of actual environmental performance (Cho et al., 2007; 2012). The debate over the results of previous studies in the literature directed this study to analyze the interaction effects of sustainable investment practices on the relationship between sustainability report disclosure and firm value. This opinion is based on the premise that companies that implement sustainable investment practices tend to disclose a broader sustainability report as a response to stakeholder demands regarding transparency of impacts on the environment. Sustainability report disclosure, as a form of activity that exceeds stakeholder expectations, is appreciated through increasing firm value. The hypothesis proposed in this study is as follows.

Hypothesis 6: *Sustainable investment practice moderates the effect of sustainability report disclosure on firm value.*

3. Methodology

3.1. Sample and data collection

The research sample comprises non-financial companies listed on the Indonesia Stock Exchange (IDX) during the 2015-2019 period. This study's sample does not include companies that did not publish a sustainability report during the observation period or did not use the GRI guidelines. Based on these sample selection criteria, the number of observations obtained was 306 firm years. The research sample consists of companies from various industry groups (Table 1). Information about each company's board member profiles, governance, and financial performance was obtained from its annual report. Meanwhile, information about the amount of sustainability report disclosure comes from the company's sustainability report which is published separately.

Table 1

Description of sample

No	Industry Group	N	Percentage
1	Consumer staples	14	21.88%
2	Healthcare	4	6.25%
3	Materials	13	20.31%
4	Industrials	11	17.19%
5	Consumer discretionary	5	7.81%
6	Energy	10	15.63%
7	Communication services	3	4.69%
8	Utilities	1	1.56%
9	Real estate	3	4.69%
	Total	64	100%

For firm value, the Tobin Q value is used which describes the past performance and future prospects of the company. The Tobin Q calculation used in this study refers to the formulation (Chung & Pruitt, 1994) with several adjustments such as changing the replacement cost to the book value of assets considering that replacement cost data is difficult to estimate. A ratio value of $Q < 1$ indicates that the firm's value is undervalued because the book value is higher than the company's market value, conversely a ratio $Q > 1$ indicates that the company is overvalued because the book value is lower than the company's market value. Board gender diversity is measured by the proportion of female board members in this proxy company in accordance with previous research by Qureshi et al., (2019). The greater the proportion, the larger the number of women represented and this reflects the diversity of perspectives in decision-making. Measurement of the intensity of sustainability report disclosure uses the sustainability reporting disclosure index (Tjahjadi et al., 2021). A higher index number indicates broader sustainability report disclosure. The maximum value of the index is 1 which indicates that the company fully discloses disclosure items based on the GRI guidelines. Based on previous research on changes in firm value (Campbell & Minguez-Vera, 2008; Chauhan & Dey, 2017; Nadeem et al., 2019; Adams & Ferreira, 2009; Carter et al., 2010; Handajani et al., 2014), this study includes specific characteristics of the company and board as control variables in the regression model, namely leverage, profitability, firm size, firm age, board size and industry group. Complete definitions and measurements of research variables are presented in Table 2.

Table 2
Summary Variables

Variable	Full variable name	Measurement
FV	Firm value	Tobin q ratio
SRD	Sustainability report disclosure	Sustainability report disclosure index
BGD	Board gender diversity	Percentage of female members on company boards
IP	Industry profile	A dummy variable with a value of 1 for high profile companies and 0 for low profile companies
SIP	Sustainable investment practice	PROPER rating
LEV	Leverage	Debt to asset ratio
PROFIT	Profitability	Return on assets
SIZE	Size of company	ln Total assets
AGE	Age of company	The difference between the reporting year and the year the company was founded
BOARD	Size of board	The total number of company board members
IND	Industry group	Industry groups based on the Global Industry Classification Standard
ϵ	Error part	
t	Time aspect (year)	
i	Cross-section aspect (firm observations)	

3.2. Empirical model

This study uses the basic four-step test developed by Baron & Kenny (1986) which examines the mediating effect of sustainability report disclosure in the relationship between board gender diversity and firm value. The regression equation formed is as follows.

Model 1: examine the effect of board gender diversity on firm value (H₁)

$$FV_{i,t} = \alpha + \beta_{11}BGD_{i,t} + \beta_{21}LEV_{i,t} + \beta_{31}PROFIT_{i,t} + \beta_{41}SIZE_{i,t} + \beta_{51}AGE_{i,t} + \beta_{61}BOARD_{i,t} + \beta_{71}IND_{i,t} + \epsilon_{i,t}$$

Model 2: examine the effect of sustainability report disclosure on firm value (H₃)

$$FV_{i,t} = \alpha + \beta_{12}SRD_{i,t} + \beta_{22}LEV_{i,t} + \beta_{32}PROFIT_{i,t} + \beta_{42}SIZE_{i,t} + \beta_{52}AGE_{i,t} + \beta_{62}BOARD_{i,t} + \beta_{72}IND_{i,t} + \epsilon_{i,t}$$

Model 3: examine the board gender diversity on the sustainability report disclosure (H₂)

$$SRD_{i,t} = \alpha + \beta_{13}BGD_{i,t} + \beta_{23}LEV_{i,t} + \beta_{33}PROFIT_{i,t} + \beta_{43}SIZE_{i,t} + \beta_{53}AGE_{i,t} + \beta_{63}BOARD_{i,t} + \beta_{73}IND_{i,t} + \epsilon_{i,t}$$

Model 4: examine the board gender diversity against firm values that are controlled by the sustainability report disclosure (H₄)

$$FV_{i,t} = \alpha + \beta_{14}BGD_{i,t} + \beta_{24}SRD_{i,t} + \beta_{34}LEV_{i,t} + \beta_{44}PROFIT_{i,t} + \beta_{54}SIZE_{i,t} + \beta_{64}AGE_{i,t} + \beta_{74}BOARD_{i,t} + \beta_{84}IND_{i,t} + \epsilon_{i,t}$$

Then, testing the moderation hypothesis (H₅ and H₆) using the moderation regression equation as follows.

$$SRD_{i,t} = \alpha + \beta_{15}BGD_{i,t} + \beta_{25}IP_{i,t} + \beta_{35}BGD_{i,t} * IP_{i,t} + \beta_{45}LEV_{i,t} + \beta_{55}PROFIT_{i,t} + \beta_{65}SIZE_{i,t} + \beta_{75}AGE_{i,t} + \beta_{85}BOARD_{i,t} + \beta_{95}IND_{i,t} + \epsilon_{i,t}$$

$$FV_{i,t} = \alpha + \beta_{16}SRD_{i,t} + \beta_{26}SIP_{i,t} + \beta_{36}SRD_{i,t} * SIP_{i,t} + \beta_{46}LEV_{i,t} + \beta_{56}PROFIT_{i,t} + \beta_{66}SIZE_{i,t} + \beta_{76}AGE_{i,t} + \beta_{86}BOARD_{i,t} + \beta_{96}IND_{i,t} + \epsilon_{i,t}$$

4. Results and analysis

4.1 Descriptive statistics of the research variables and Pearson correlation analysis

Table 3 shows the descriptive statistics of the research variables. It shows the indicators for the number of observations, minimum, maximum, mean, and standard deviation values.

Table 3
Descriptive Statistics

Variable	Obs	Minimum	Maximum	Mean	Standard deviation
FV	306	0.168	23.286	2.003	2.939
BGD	306	0.000	0.500	0.084	0.098
SRD	306	0.000	0.956	0.235	0.196
IP	306	0.000	1.000	0.392	0.489
SIP	306	0.000	5.000	1.699	1.806
LEV	306	0.034	1.923	0.523	0.277
PROFIT	306	-0.551	0.581	0.050	0.106
SIZE	306	27.255	33.495	30.370	1.263
AGE	306	2.000	90.000	37.771	18.181
BOARD	306	5.000	25.000	11.265	3.240

The value of the Q ratio for all samples ranges from 0.168 to a maximum value of 23.286, with an average of 2.003 which indicates that the average value of the sample companies is overvalued. The proportion of female board members ranges from 0% to 50%, meaning that there are companies that have homogeneous gender diversity (100% male), and some companies have female members making up 50% of the entire board. The average value of the proportion of female councilors is quite

low (8.44%), and lower than other developing countries such as Vietnam (12.7%) but above Malaysia (8%) (Nguyen et al., 2021). The sustainability report disclosure index has an average of 0.235 which indicates that, in general, the number of items disclosed by companies is quite low compared to the value of full disclosure. The average industry profile is 0.392 which indicates that the sample consists of 39.20% high-profile companies and 60.80% low-profile companies. The PROPER rating value as a proxy for sustainable investment practice ranges from 0 to 5, indicating that there are companies that do not participate in the PROPER program. Only 48.69% of the companies in the sample practice sustainable investment. A Pearson correlation analysis was performed before testing the regression analysis. The test results show that there is a significant positive correlation between the board gender diversity (BGD) variable and firm value (FV) and a significant negative correlation between the board gender diversity (BGD) variable and the sustainability report disclosure (SRD) at a significance level of 0.05 (Table 4).

Table 4
Correlation Testing

	FV	SRD	BGD	IP	SIP	LEV	PROFIT	AGE	BOARD	SIZE
FV	1									
SRD	-0.067	1								
BGD	0.222*	-0.189*	1							
IP	-0.053	0.173*	-0.092	1						
SIP	0.094	0.326*	-0.180*	0.190*	1					
LEV	0.068	0.063	-0.040	0.023	-0.128*	1				
PROFIT	0.565*	0.009	0.111	0.010	0.155*	-0.431*	1			
AGE	0.397*	0.251*	0.061	-0.063	0.201*	0.211*	0.233*	1		
BOARD	0.026	0.158*	0.012	-0.035	0.087	-0.086	0.163*	0.242*	1	
SIZE	-0.182*	0.268*	-0.165*	0.170*	0.196*	0.192*	-0.105	0.130*	0.546*	1

Notes: *0.05 Sig.

4.2 Testing the research hypotheses

Testing the research hypotheses used panel data regression analysis. The estimation of the parameters of the panel data regression model uses three types of models, namely the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The determination of the appropriate estimation model for each hypothesis uses the Chow test, the Hausman test, and the Lagrange Multiplier test. The research model uses a fixed effect model with a dummy control for industrial group variables (least-square dummy variable/LSDV model). The use of the model controls for the influence of industry groups on individual firms. The use of this dummy variable aims to avoid perfect collinearity in the model (Gujarati, 2004).

Table 5
Results of Multivariate Analysis

Variable	Firm Value (Y)				Sustainability Report Disclosure (Y)	
	Model 1	Model 2	Model 4	Model 6	Model 3	Model 5
Constant	6.139 0.048	6.599 0.036	5.428 0.072	6.359 0.046	-0.747 0.013	-0.679 0.024
BGD	2.587* 0.025		2.353* 0.039		-0.245* 0.021	-0.003* 0.001
SRD		-1.087* 0.046	-0.952 0.070	-1.198 0.106		
SIP				-0.039 0.377		
SRD*SIP				0.068 0.417		
PP						0.030 0.177
BGD*PP						0.004* 0.044
LEV	4.061* 0.000	4.035* 0.000	4.019* 0.000	0.040* 0.000	-0.044 0.182	-0.000 0.368
PROFIT	17.169* 0.000	17.234* 0.000	17.144* 0.000	0.172* 0.000	-0.026 0.416	0.000 0.435
SIZE	-0.253* 0.029	-0.264* 0.023	-0.224* 0.047	-0.254* 0.033	0.030* 0.007	0.027* 0.013
AGE	0.030* 0.000	0.034* 0.000	0.032* 0.000	0.035* 0.000	0.002* 0.001	0.002* 0.004
BOARD	-0.001 0.490	0.013 0.393	0.001 0.495	0.012 0.398	0.002 0.327	0.003 0.215
IND	YES	YES	YES	YES	YES	YES
N	306	306	306	306	306	306
R²	0.577	0.575	0.580	0.576	0.214	0.233
F-Statistic	28.33	28.17	26.69	26.20	5.66	5.49
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000

Notes: *0.05 Sig

The results of the multivariate analysis in Table 5 show that hypothesis 1 is accepted. Board gender diversity has a significant positive effect on firm value ($\beta_{11}=2.587$, $p < 0.05$). The greater the proportion of female boards in the company, the greater the value of the company. Hypothesis 2, which states that board gender diversity has a positive effect on sustainability report disclosure, is rejected ($\beta_{13} = -0.245$, $p < 0.05$). Based on the test results, there is a significant negative effect on the relationship between the board gender diversity and the level of sustainability report disclosure. Furthermore, hypothesis 3, which states that sustainability report disclosure has a positive effect on firm value, is not accepted. The test results show that the sustainability report has a negative effect on firm value ($\beta_{12} = -1.087$, $p < 0.05$). Hypothesis 4, which examines the effect of board gender diversity on firm value through the mediation of sustainability report disclosure, is rejected. The tests show the effect of sustainability report disclosure on firm value with the board gender diversity control having a p value > 0.05 , meaning that this path is not significant. Sustainability report disclosure cannot act as a mediator in terms of the effect of board gender diversity on firm values. Hypothesis 5 predicts that industry profile can moderate the relationship between board gender diversity and sustainability report disclosure. According to the testing, this hypothesis is proven because industry profile interactions weaken the effect of board gender diversity on sustainability report disclosure ($\beta_{35} = 0.004$, $p < \alpha = 0.05$).

The results of the testing of hypothesis 6, which states that sustainable investment practices moderate the effect of sustainability report disclosure on firm value, are not significant. Hypothesis 6 is not supported in this study. The results of hypothesis testing are summarized in Table 6 below.

Table 6
Summary of Results of Hypothesis Testing

Hypothesis	Prediction	Result	Significance	Description	Conclusion
H ₁ : BGD > NP	+	+	Sig	Significant, same direction	Accepted
H ₂ : BGD > SRD	+	-	Sig	Significant, different direction	Rejected
H ₃ : SRD > NP	+	-	Sig	Significant, different direction	Rejected
H ₄ : BGD > SRD > NP	+	+	Non-sig	Not significant, same direction	Rejected
H ₅ : BGD*PP > SRD	+	+	Sig	Significant, same direction	Accepted
H ₆ : SRD*SIP > NP	+	+	Non-sig	Not significant, same direction	Rejected

5. Discussion

This study aims to analyze the direct effect of board gender diversity on firm value and the indirect effect of board gender diversity on firm value through sustainability report disclosure. This study also examines the interaction effect of industry profile and sustainable investment practice on the relationship between board gender diversity, sustainability report disclosure, and firm value. Tests were carried out on non-financial companies listed on the Indonesia Stock Exchange during the 2015-2019 period. The results of hypothesis testing show a significant relationship. The testing of hypothesis 1 proves that board gender diversity is able to increase firm value. The presence of women board members is appreciated by the market as a kind of internal mechanism that strengthens the monitoring function and establishes a more independent board. These findings support previous studies which have found that female directors can act as tough controllers in overseeing the company and protecting the interests of investors (Adams & Ferreira, 2009; Gyapong et al., 2016; Loukil et al., 2019). The existence of gender diversity on a board can increase transparency meaning it acts as a governance substitution mechanism for companies with low-quality governance (Loukil et al., 2019). Increased participation of women on boards in strategic decision-making leads to an increase in the quality of board decisions. This is associated with their assignment to important positions such as audit committees, nomination and remuneration committees, governance, and CSR (Adams & Ferreira, 2009; Loukil et al., 2019). This study confirms the perspective of agency theory that increased board monitoring can create better corporate behavior which ultimately leads to increased firm value (Isidro & Sobral, 2015).

The testing of hypothesis 2 provides important evidence that the existence of gender diversity on a board reduces the level of sustainability report disclosure. The research findings are inconsistent with the perspective of social role theory which states that individual women play a role in changing orientations regarding strategic decision-making regarding sustainability disclosure. According to this theory, women have characteristics such as high moral standards, sensitivity, high levels of sympathy and empathy, and so they encourage companies to practice and express social and environmental responsibility more broadly (Amorelli & García-Sánchez, 2020). However, the results of this research do not prove this theory. The presence of women board members leads to a decrease in the level of sustainability report disclosure. Women board members tend to avoid the risk of reduced corporate profits due to sustainability disclosure activities. The women on boards also avoid the risk of revealing strategic information to competitors as a result of the transparency of sustainability information. The results of this study demonstrate the "think manager think male" view which posits that the characteristics associated with success in leadership are male or masculine ones (Schein & Lituchy, 1996). When women act as leaders, they tend to be competitive and dominant, avoid the risk of reduced profits, have a financial growth orientation, and other masculine actions (Boutchkova et al., 2020). These characteristics lead to a decrease in social-environment orientation so it becomes a justification for the view that the gender diversity of a board has a negative effect on the sustainability report disclosure. This finding reinforces the results of a study (Handajani et al., 2014) which found that women's involvement in company boards does not necessarily

encourage altruistic behavior and a better perspective on ethical and environmental issues. This study finds that the majority of companies only place one woman on the company's board, so they do not have sufficient power to influence strategic decision-making. The position of women as a minority group causes them to tend to conform to the opinion of the majority, and refrain from expressing different views (Konrad et al., 2008). Women on boards need to make more efforts so that their opinions are heard, get involved in strategic decision-making, and have an impact on the company. The low level of involvement of women in decision-making and business practices is inseparable from the "glass ceiling" phenomenon. This phenomenon explains that there is an invisible barrier that prevents women from being involved in business. Culture and stereotypes are obstacles to women's involvement in business (Anazonwu et al., 2018; Herdhayinta et al., 2021). The patrilineal cultural context in Indonesia places men as the main power holders and they dominate leadership roles in the political, economic, and social fields, thus creating a gender gap in the world of work (Herdhayinta et al., 2021). This condition has similarities with developing countries that have similar cultural backgrounds to Indonesia such as Sri Lanka (Shamil et al., 2014), Vietnam (Nguyen et al., 2021), and Malaysia (Ahmad et al., 2018).

The testing of hypothesis 3 shows that sustainability report disclosure has a negative effect on firm value. The broader the sustainability report disclosure, the lower the firm value. Investors react negatively to information and disclosure practices that are long-term oriented because investors have a focus on short-term returns. The research results support previous studies (Bachoo et al., 2013; Kartadjumena & Rodgers, 2019; Nguyen, 2020). Submission of reports and sustainability activities is considered a waste of resources and incurs costs, thus impacting the wealth of shareholders (Nguyen, 2020). Sustainability report disclosure is seen as not providing direct benefits to managers, so investors negatively evaluate companies that make sustainability disclosures (Kartadjumena & Rodgers, 2019). Investors use information about fundamentals as a basis for making investment decisions so they tend to ignore the benefits of sustainability report disclosure for companies. Descriptive statistics show that the average level of corporate sustainability report disclosure is quite low, namely 23.5%. The low level of disclosure causes investors not to have enough information to assess the actual process of the practice of sustainability reporting disclosure. This finding is reinforced by the results of the study by Ardiana (2021) on public companies in Indonesia which found that sustainability reporting disclosure is a symbolic activity and aims to comply with regulations and respond to political pressure. This creates a tendency for cherry-picking in order to only show positive impacts and obscure the negative impacts of company activities, so investors have a negative perception of the sustainability report disclosure.

The testing of hypothesis 4 yielded results that are not able to demonstrate that sustainability report disclosure mediates the effect of board gender diversity on firm value. This research did not find evidence that the effect of board gender diversity on firm value has a qualitative improvement effect as was the case in the study by Isidro & Sobral (2015). The board with gender diversity, which is expected to be able to increase ethical compliance and pro-social actions, is limited by a lack of knowledge and ability to understand the importance of sustainability reports. A study by Ardiana (2021) found that the traditional paradigm views social responsibility and sustainability only as forms of "friendliness" and not the company's core business, so the board does not support the issue of sustainability report disclosure. Meanwhile, the early stages of implementing sustainability in Indonesia have contributed to the low level of support for and attention to this issue on the part of corporate boards. The majority of sustainability initiatives are implemented in the financial sector and have not touched the other sectors (Halimatussadiyah et al., 2018). Legal and political conditions, as well as limited human resource capital, are the causes of the lack of board and investor awareness of sustainability activities (Guild, 2020).

The testing of hypothesis 5 demonstrates that the industry profile is able to moderate the effect of board gender diversity on sustainability report disclosure. The interaction of high-profile company characteristics is able to reduce the effect of board gender diversity which reduces the level of sustainability report disclosure. The presence of women in the boardroom, which is expected to improve the monitoring and supervision function, does not encourage broader sustainability disclosure. However, this influence is reduced for companies that have high consumer visibility, high political risk, strong competition, and that engage in activities with an environmental impact. These results are consistent with research by Hyun et al. (2016) which confirms that the presence of female directors affects the performance of corporate social responsibility, and this relationship is influenced by the conditions of companies that have a certain profile (high market exposure and the importance of their CSR reputation). The stakeholder theory approach explains that stakeholder pressure through increased risk and company visibility is able to reduce the effect of board gender diversity on sustainability report disclosure.

The testing of hypothesis 6 shows that sustainable investment practices are not able to moderate the effect of sustainability report disclosure on firm value. Based on the direction of the relationship, sustainable investment practice reduces the effect of sustainability report disclosure on firm value. This means that the existence of sustainable investment practices is able to reduce the negative effect of sustainability report disclosure on firm value. It is believed that the negative effect of sustainability report disclosure on firm value can be reduced when the company actually implements sustainability practices. The market appreciates sustainability disclosure accompanied by real sustainability practices. However, in this study, the effect is not significant, so sustainable investment practice does not act as a moderator.

6. Conclusion

This research model uses several control variables, namely leverage, profitability, firm size, firm age, board size, and industry group. Companies with high leverage levels receive tighter supervision from creditors regarding carrying out information transparency, tightening debt agreements, limiting the use of free cash flow so that the interests of creditors are protected, and increasing firm value (Hummel & Schlick, 2016; Ogden et al., 2012; Campbell & Mínguez-Vera, 2008). Companies with high profitability are able to attract the attention of investors to invest funds thereby expanding investment opportunities and reducing bankruptcy risk, as well as giving them a stronger ability to pay dividends (Indriyani, 2017). In terms of company size, large companies attract investors because they have good governance mechanisms, low business risks, are profitable, and have greater market power which has an impact on company performance and value (Agyemang-Mintah & Schadewitz, 2019; Ogden et al., 2012; Adams & Ferreira, 2009; Carter et al., 2010). Conversely, in terms of age, companies that have been established for a long time tend to be more rigid and less efficient in their activities, and lose the ability to compete and innovate, causing their value to decrease (Isidro & Sobral, 2015). An increasing number of board members reflects a strong influence in terms of monitoring, so it leads to an increase in firm value (Ahmad et al., 2018). Certain industrial groups tend to have good environmental performance and this leads to an increase in firm value (Garcia et al., 2017).

This study aimed to examine the direct effect of board gender diversity on firm value and the indirect effect through sustainability report disclosure. The study also examined the moderating influence of industry profiles on board gender diversity's relationship with sustainability report disclosure and the interaction of sustainable investment practices with the relationship between sustainability report disclosure and firm value. The study used 64 multi-sectoral companies that were not in the financial sector and that were listed on the Indonesia Stock Exchange during the 2015-2019 period. The research findings have provided clear evidence about the effect of the presence of women on boards on increasing firm value. On the other hand, the presence of women on boards reduces the level of sustainability report disclosure. The relationship between these two variables is weakened when the company has a stronger industry profile. In addition, this study has not been able to demonstrate the mediating role of sustainability report disclosure in the effect of board gender diversity on increasing firm value. The interaction effect of sustainable investment practice is not significant according to this study's findings.

The research findings have practical and theoretical implications. Companies can consider a board structure with an increased proportion of women members to create a more independent and qualified board. The increased participation of women on boards is closing the gap as women can be seen as individuals with abilities, not as symbols. Regarding the sustainability report disclosure, it is necessary for all members of the company's board to have a technical understanding bearing in mind that the concept of sustainability in business is still in the early stages of implementation. Theoretically, the research findings provide a better understanding of board gender diversity, sustainability report disclosure, and firm value within the multi-theoretical framework of agency theory, stakeholder theory, and social role theory in developing countries.

This research has several limitations. Its findings cannot be generalized to the context of financial companies, considering that companies in the financial sector have various regulations governing their operations. This study also does not analyze other board diversity attributes that can be observed such as minority/race groups, nationality, educational background, age, the duality of leadership, and tenure, so future research could consider these attributes. The relatively short duration of the period of observation could be avoided in future studies. Measurement of sustainability report disclosure could consider the quality of disclosure given that the number of disclosure items tends to be biased by actual sustainability performance.

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